

### **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions, and listings, of claims in the application:

#### **Listing of Claims**

- 1.-2. (Canceled)
3. (Currently Amended) The method of claim 8 [[2]], further comprising separating a copper-containing slag portion from the steel portion created by the fluxing process.
4. (Canceled)
5. (Currently Amended) A method for removing copper from ferrous scrap, comprising:  
  
    providing a ferrous scrap containing copper;  
  
    oxidizing the copper in the ferrous scrap at a rate higher than the oxidation rate of the remainder of the scrap~~The method of claim 4~~, wherein the oxidation is performed at a temperature ranging from about 400 to about 700 °C and for a time ranging from ~~about~~about 4 to about 6 hours; and  
  
    impacting the oxidized scrap.
6. (Currently Amended) The method of claim 8 [[1]], wherein the impacting is performed by tapping or shaking.

7. (Canceled)

8. (Currently Amended) A method for removing copper from ferrous scrap, comprising:

providing a ferrous scrap containing copper;

oxidizing the copper in the ferrous scrap at a rate higher than the oxidation rate of the remainder of the scrap;

impacting the oxidized scrap;

fluxing the oxidized scrap after it is impacted using a slag selected from the group consisting of  $\text{Na}_2\text{O}$ - $\text{B}_2\text{O}_3$ - $\text{SiO}_2$ -based slags, a modified electric arc furnace slag based on  $\text{CaO}$ - $\text{SiO}_2$ - $\text{B}_2\text{O}_3$ , and combinations thereof at temperatures below the melting point of steel. ~~The method of claim 7, wherein the melting point of the EAF slag is lowered by mixing an additive with the oxidized slag.~~

9. (Previously Presented) The method of claim 8, wherein the additive comprises  $\text{B}_2\text{O}_3$ ,  $\text{CaF}_2$ ,  $\text{Na}_2\text{O}$  or a combination thereof.

10. (Previously Presented) The method of claim 9, wherein the amount of additives can range up to about 30 wt%.

11. (Previously Presented) The method of claim 10, wherein the amount of additives can from about 5 to about 15 wt%.

12. (Original) The method of claim 3, wherein the separation is performed by a metallurgical process.

13. (Currently Amended) The method of claim 8 8 ~~[[2]]~~, wherein the fluxing process both creates an upper portion containing copper and a lower portion containing steel and then removing~~ing~~~~[[ed]]~~ the upper portion by sloughing.

14.-24. (Canceled)

25. (Original) A method for removing copper from ferrous scrap, comprising:  
providing a ferrous scrap containing copper;  
converting the copper in the ferrous scrap to a copper oxide; and  
dissolving the copper oxide into a molten slag by removing about 90 to less than about 100 wt% of the copper in the scrap.

26. (Original) The method of claim 25, further comprising removing from about 99.5 wt% to about 99.9 wt% of the total copper.

27. (New) The method of claim 8, further comprising removing about 90 wt% to less than about 100 wt% of the copper in the ferrous scrap.

28. (New) The method of claim 8, further comprising removing from about 99.5 wt% to about 99.9 wt% of the copper in the ferrous scrap.